

U.S. Patent Application Serial No. 09/976,036
Response dated December 8, 2003
Reply to OA of July 7, 2003

REMARKS

Claims 1-11 are pending in this application. Claims 2 and 11 have been canceled without prejudice. It is believed that this Amendment is fully responsive to the Office Action dated July 7, 2003.

Claim 1 has been amended to incorporate the limitations of canceled claim 2 and to require an tensile elongation percentage of 3 % to 50 %. Support for this amendment appears throughout the specification and claims as originally filed. No new matter has been added.

In view of the amendment to claim 1 and the remarks set forth below, further and favorable consideration is respectfully requested.

I. At page 2 of the Office Action, the Examiner requires affirmation of the provisional election of claims 1-10 of Group I.

According, Applicant's hereby affirm the election of claims 1-10 of Group I. Claim 11 of Group II has been canceled without prejudice.

II. At page 3 of the Office Action, claims 1, 3-7, 9, and 10, have been rejected under 35 USC §102 (b) as being anticipated by Kurtz et al., U.S. 4,568,604.

The Examiner states that Kurtz discloses a three-layered laminate that meets the limitations of claim 1. The Examiner further states, with regard to the remaining claims, that limitations including gelation time and viscosity of the curable resin composition, are process limitations and that the cured resin composition is the same regardless of gelation time and viscosity of the uncured resin. With regard to tensile elongation, Barcol hardness, and tensile strength, the Examiner states that these materials properties are inherent in the composition of Kurtz.

Anticipation under 35 USC § 102 requires that a single prior art reference teach each and every element of the claimed invention.

U.S. Patent Application Serial No. **09/976,036**
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Present claim 1 has been amended to include the limitations of canceled claim 2 and to require a tensile elongation of 3 % to 50%. More specifically, claim 1 has been amended to recite that the filler includes hollow filler having a mean particle size of 5 to 200 μm .

Kurtz discloses an FRP laminate having a three-layer structure where the intermediate layer includes unsaturated polyester resin. According to the description of claims 12 and 13 of Kurtz, the resin used for the intermediate layer is a general, not specific, unsaturated polyester resin. Therefore, the tensile elongation percentage of the general unsaturated polyester resin of Kurtz is "2% or less". In support thereof, please see a partial English translation of each of "*Practical Plastic Encyclopedia*" page 230, 1st ed., pub. by SANGYO CHOSAKAI, May 1, 1993; and "*Polyester Resin Handbook*" page 270, 1st ed., pub. by The Nikkan Kogyo Shimbun, Ltd., June 30, 1985, attached hereto along with a copy of the Japanese documents.

Kurtz does not teach a Barcol hardness of 50 or more, and does not teach a tensile elongation percentage of 3% to 50%, as required by the present claims.

Kurtz does not teach a hollow filler having the claimed mean particle size.

Accordingly, Kurtz does not teach each and every element of the claimed invention as required for anticipation under 35 USC § 102. Thus, the Examiner is respectfully requested to withdraw this rejection.

III. At page 5 of the Office Action, claims 2 and 8, have been rejected under 35 USC § 103(a) as being unpatentable over Kurtz et al., U.S. 4,568,604 in view of Burnell-Jones, U.S. 6,207,077.

The Examiner states that Kurtz does not disclose a hollow filler, but that Burnell-Jones discloses the use of calcium carbonate fillers and teaches that hollow microspheres are widely used in resin systems to reduce density, to improve stiffness, to impart resistance, to reduce crazing and to displace large volumes of higher priced polymers. The Examiner concludes that it would have been obvious to replace the fillers of Kurtz with the hollow microspheres of Burnell-Jones.

Burnell-Jones discloses luminescent gel coats and moldable resins.

U.S. Patent Application Serial No. **09/976,036**
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Burnell-Jones does not disclose an FRP laminate having a three-layer structure. Burnell-Jones discloses only a general unsaturated polyester resin for forming or molding. As discussed above in regard to the previous rejection, a general unsaturated polyester resin has a tensile elongation percentage of 2 % or less.

Burnell-Jones does not suggest using a hollow filler material in an intermediate layer of a three-layered structure, as presently required.

Kurtz does not disclose a hollow filler, and does not disclose the claimed tensile elongation percentage of 3 % to 50 %. Burnell-Jones does not cure the deficiencies of Kurtz, because Burnell-Jones also does not disclose the claimed tensile elongation percentage, and does not suggest adding a hollow filler to an intermediate layer of a three-layered structure.

In view of amendment to claim 1 and the remarks set forth above, it is submitted that nothing in Kurtz and Burnell-Jones, taken alone or together, render the claimed invention obvious within the meaning of 35 USC § 103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

In view of the aforementioned Amendment and accompanying remarks, it is submitted that the claims are in condition for allowance, which action at an early date is respectfully requested.

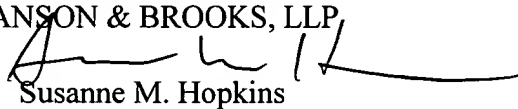
If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

U.S. Patent Application Serial No. **09/976,036**
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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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